UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
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NOV 17 2014

The Honorable Bob Martin
Commissioner, New Jersey Department of
Environmental Protection
PO Box 402
401 East State Street, Floor 7
Trenton, NJ 08625-0402

Dear Commissioner Martin:

This is to follow up our conversations about the proposed project at the Rahway Arch Properties LLC site (Site), located at 300 Salt Meadow Drive in Carteret, New Jersey. Thank you for affording my staff the opportunity to meet with your staff and the Licensed Site Remediation Program (LSRP) consultant on November 13, 2014, regarding the project. The U.S. Environmental Protection Agency (EPA) continues to have serious concerns about this Site.

Rahway Arch Properties LLC proposed to the New Jersey Department of Environmental Protection (NJDEP), through its consultant, EastStar Environmental Group (LSRP consultant for Site), to address the 125-acre Site in a wetlands complex immediately adjacent to the Rahway River. The work proposed would involve the placement of an "engineered low permeability fill cap" (cap) over the existing six surface impoundments containing approximately 2 million tons of contaminated sludge which comprise over 85 acres of the Site, and implementation of storm water controls. Soil placement thicknesses in the range of five (5) to thirty (30) feet were assumed for the cap during the geotechnical investigation. The LSRP consultant expects the cap to have an average Site thickness of eight (8) feet. The cap would be comprised of thousands of cubic yards of low-level petroleum contaminated soil; the soil would be processed on-site by Soil Safe under an NJDEP-issued Class B recycling permit. The objectives of the cap are to raise the Site above the high tide levels of the Rahway River and the new Advisory Base Flood Elevations to prevent storm water infiltration, presently estimated at 25,500,000 gallons of water, from infiltrating through the contaminated materials into the groundwater; to manage and discharge the storm water to surface water through an engineered storm water management system; and to establish a structurally stable surface on the Site that also prevents direct contact with the yellow prussiate of soda-aluminum sludge.

EPA conducted a review of the proposed site remediation plan. A number of EPA staff and I conducted a site visit on June 24, 2014 and, at EPA's request, were provided by NJDEP with numerous site documents for EPA's review. In addition to our recent meeting, this information was helpful in allowing EPA to come to a more thorough understanding of the site conditions and site remediation plan.

Based on EPA's review of the proposed plan, EPA has identified several concerns and seeks further clarification regarding the protectiveness of the proposed remedial approach.

EPA believes that further site investigation is needed to clearly define the goals and objectives of the proposed remedial plan. Comprehensive, site-wide remedial action objectives should be initially established to describe what the remedial action is expected to accomplish for the entire site; and preliminary remedial goals should be developed as targets for the remedial action to be protective of human health and the environment. EPA does not understand, for example, how the LSRP consultant plans to investigate potential impacts to the "wetland areas and the adjacent surface water features" in the immediate vicinity of the sludge impoundments while the cap is being constructed. EPA believes such potential impacts should be characterized in advance of cap construction and considered earlier in the Site remedy selection process if necessary and appropriate.

Remedial action objectives provide a general description of what the cleanup is expected to accomplish and help focus the development of remedial alternatives. Remedial action objectives specify the contaminants and media of concern, exposure routes and potential receptors, and an acceptable concentration limit or range for each contaminant for each of the various media, exposure routes and receptors. Remedial action objectives are developed early in the remedial alternative development process to set targets for achieving preliminary remediation goals (such as applicable or relevant and appropriate requirements to protect public health and the environment). The remedial action objectives should be as specific as possible but should not limit the range of remedial alternatives that can be developed.

In addition to the lack of clearly defined remedial action objectives and preliminary remediation goals for the entire site, EPA is concerned about the cap's design basis and impacts that may occur during its construction on areas of the site that overlie any groundwater that will contact the sludge and discharge to the Rahway River.

The proposed cap design is based on the existing hydrostatic conditions; that is, contaminated groundwater migrates from the site and then discharges and mixes with the Rahway River surface water. It is our concern that this groundwater will likely become mounded beneath the proposed cap construction. We believe that once the cap (especially with the elevations proposed) is in place, the new compressional and vertical load forces will increase downward pressure on the mounded groundwater, and contribute towards changing the current hydrostatic conditions and potentially resulting in changes to groundwater migration, direction and flow path. In addition, there is the potential that the new cap will also introduce lateral forces on the existing berms whose existing structural integrity has not been established (inconsistent information in the site files regarding the berm stability should be addressed). Our major concern is one of unintended consequences. EPA has not been provided sufficient information to establish a significant degree of confidence that these lateral forces will not compromise the existing structural integrity of the berms and potentially cause a catastrophic release.

The final remedial alternative analysis, which may or may not include a cap, should also address whether additional engineering controls [such as groundwater collection/ extraction/treatment and site containment (slurry walls, sheet piling and/or reactive walls/cap) in the area of discharge] are warranted to protect human health and the environment.

To summarize, EPA has the following specific questions regarding the proposed Site remediation:

1) Please describe the remedial action objectives and "entire Site" remedial goals for the remedial action to be protective of human health and the environment.

2) How will the cap construction activities be performed and monitored to avoid berm failure and releases to areas outside such berms including to the Rahway River?

3) How will the displaced contaminated volume within the impoundments anticipated during cap construction be managed?

4) How will the efficacy of the cap in protecting human health, groundwater, surface water, and the wetlands in proximity to the Site during and, long-term, after construction be assessed?

5) Please explain why the cap does not need to be supplemented with additional engineering controls as described in the above paragraph?

6) How will currently compromised berm areas be repaired?

7) Since areas outside the bermed impoundments have not yet been appropriately characterized, how will they be evaluated for remediation?

8) Since the Rahway River is known to currently routinely flow in and out of at least one of the impoundment areas, how will the cap be protected from flooding?

9) Please explain how the "entire Site" remedy will be financially assured to be indefinitely monitored and properly maintained to be protective of human health and the environment.

10) What specific funding amount has been dedicated for this purpose and how will it be replenished, if necessary, for the indefinite life of the capping remedy?

In 2007, EPA requested that the NJDEP conduct a reassessment of the Site under the Hazardous Waste Inventory Preliminary Assessment/Site Investigation Cooperative Agreement. That reassessment, dated September 2007, resulted in a decision by EPA of No Further Remedial Action Planned (NFRAP) under the federal Superfund program. On April 25, 2013, the NJDEP staff conducted a Site Inspection which concluded that the Site conditions had changed. In particular, Impoundment 1 had released materials into a creek leading to the Rahway River. Because conditions at the Site changed, the EPA requests the NJDEP reassess the Site under the Hazardous Waste Site Inventory Preliminary Assessment/Site Investigation Cooperative Agreement.

I look forward to receiving your response to EPA's concerns. Thank you.

Sincerely,

Judith A. Enck

Judith A. Enck
Regional Administrator

cc: Mark J. Pedersen, NJDEP